

The New Trade Economy of Food Security: Repositioning Canada

Independent Agri-Food Policy Note

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The Issue

Food access and equity of access to food is rapidly becoming an issue as the global coronavirus pandemic and fear of Covid-19 infections roll on. This is clear and tangible on the demand side at grocery stores, where shelves are bare of some products, and checkout lines can be long. North America, Europe, and indeed most of the world are still in the acute emergency response phase of the pandemic, and with access to food service sharply limited, runs on grocery stores to stock up are balanced with concerns for personal safety and worry that some food continues to be hard to find.

Equally important on the supply side in Canada are the difficulties in obtaining adequate labour for field operations for planting, obtaining timely fertilizer and chemical inputs, as well as the difficulties faced by food processors to maintain production schedules. This deeply affects the livestock sector, since delays in slaughter and processing of meat is creating backlogs of animals on farms, increasing costs, and reducing their value in the marketplace. It can also sharply affect Canada's ability to service both domestic and international markets.

On a wider spectrum of the supply side, more long-term shifts are occurring that will impact agri-food markets and supply chains for some time to come. Just as households stock up on or hoard foods, some countries that are traditional exporters are beginning to restrict supplies they are prepared to export out of the concern for feeding their own first. To illustrate,

Kazakhstan- a major exporter of wheat flour¹-recently banned that export, along with other cereals and staple foods.² Other examples include Vietnam which has constrained rice exports, and Russia processed grains.³ A number of other exporting countries have not invoked protectionist measures; their exports and imports are already limited by the practical constraints on export shipping logistics in the global coronavirus-influenced environment. This trend may continue to spread.

It is important to understand that as some major exporters holdback product there are actually very few countries that have surplus capacity to offer agri-food products to others, particularly when the exporting country's imports of like product is netted from its exports. We refer to that as "net" exports. In this regard Canada is among just a handful of net export countries, and has an important role to play.

The purpose of this policy note is to explore the agri-food domestic supply and export capacity of countries, and what this may mean going forward in the current crisis.

Food Export Capacity

Reviewing agri-food exports by country is of limited use in assessing which countries have export capacity. The essential problem is illustrated in Table 1 below, which ranks the ten largest agri-food exporting and importing countries, by value. The table shows that the countries with the highest level of agri-food

¹ According to worldstopexports.com, Kazakhstan was the number two exporter of wheat flour in 2018

<http://www.worldstopexports.com/flour-exports-by-country/>

² <https://www.straitstimes.com/world/europe/as-coronavirus-takes-hold-some-countries-are-creeping-towards-food-protectionism>

³ See the Food Exports Restrictions Tracker

<https://public.tableau.com/profile/laborde6680#!/vizhome/ExportRestrictionsTracker/FoodExportRestrictionsTracker>

Table 1 Top 10 Agricultural and Food Trading Nations, by Value

| Exporters | | Importers | |
|---------------------|-------------|---------------------|-------------|
| Agricultural (2017) | Food (2018) | Agricultural (2017) | Food (2018) |
| EU | EU | EU | EU |
| USA | USA | China | USA |
| Brazil | Brazil | USA | China |
| China | China | Japan | Japan |
| Canada | Canada | Canada | Canada |
| Indonesia | Indonesia | South Korea | South Korea |
| Thailand | Argentina | Russia | Hong Kong |
| India | Mexico | Mexico | Russia |
| Australia | India | Hong Kong | Mexico |
| Mexico | Thailand | India | India |

Source: World Trade Statistical Review, 2019. WTO

exports tend to also have the highest level of agri-food imports. It is also mostly a list of large countries according to population, economy, and physical size. Canada is both the fifth largest exporter, and fifth largest importer.

In evaluating the *capacity* of a country to supply others with food, the following considerations apply. The endowment of a country in terms of natural resources and capacity to produce farm products sustainably at scale is of chief importance. It is important to recognize food processing and distribution capacity can be built where needed but the natural resource endowment to support agriculture cannot.⁴

⁴ Agricultural capacity can be improved and augmented, but these effects are at the margin. For example, productivity can be improved through technology, expertise, or beneficial management practices. But for all practical purposes new land and soils cannot be added sustainably to increase agricultural capacity

⁵ UN-Comtrade data, accessed through the International Trade Centre www.worldmap.org

Production is a poor measure of export capacity, as (depending on the product) many of the largest agri-food producers have large domestic populations of their own to feed, and are also major importers. This is evident from Table 1.

Demonstrated exports of a product in the past are typically taken as a measure of export potential in future. However, if we wish to understand a country’s true capacity to sustain export, the flow of imports of the product into the country must also be accounted for- as part of that country’s exports may actually be derived from imported product. Or conversely, the exporting country backfills its own needs with imports. Thus, a better metric to reflect capacity is net exports (exports-imports). For example, in 2018 the Netherlands was the number eight exporter of soybeans, at about 973,000 tonnes; however, it was also the number four importer at 4.28 million tonnes.⁵

One way to put this in context is the ratio (exports-imports)/production. Essentially, this tells us what share of agri-food production a country has as surplus that can be exported.⁶ It is important to note that it does not tell us the sustainability of that production, which exceeds the scope of this policy note.

Export Capacity Metrics

The international dataset compiled by the OECD⁷ contains cross-country information from which the above indicator of export capacity can be calculated. The data are for 2017, with exports, imports, and production measured in thousand tonnes, summed into an aggregate across agricultural products- grains,

⁶ The fundamental supply-demand relationship $Production + Imports = Consumption + Exports$ tells us that a positive (exports-imports) implies production exceeds domestic consumption (ignoring changes in stocks)

⁷ https://www.oecd-ilibrary.org/agriculture-and-food/data/oecd-agriculture-statistics/oecd-fao-agricultural-outlook-edition-2019_eed409b4-en

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oilseeds, meats, dairy products, and limited horticultural products. This is illustrated in Figure 2 on the last page of this note for a representative set of countries.

The data presented in the figure illustrates that there are very few countries with material capacity to generate net exports in excess of their own needs. In Figure 2, only Argentina, Australia, Brazil, Canada, Kazakhstan, Paraguay, Thailand, and Ukraine exceeded 30% net exports in excess of their own production in 2017. Some of the largest agri-food exporters exported smaller percentages of their production base, including the US (22%) and Russia (29%). While New Zealand is highly trade surplus in some products (e.g., sheep meat, skim milk powder), across a range of products it was relatively balanced with a 7% net export surplus.

Of the countries listed in the figure, fully half were food deficit in aggregate, as indicated by a negative ratio.⁸ This includes some countries that have significant export-oriented industries, most notably the European Union (-10%). It also includes some of the largest agri-food producers. China was net deficit (-18%) in agri-food; India had a surplus but in 2017 it was only slight (<1%). Both are expected to become increasingly deficit.

Some developed countries experienced significant agri-food deficits in 2017, notably South Korea and Japan. Of the four major African countries listed, all four (Egypt, Ethiopia, Nigeria, and South Africa) were deficit.

While many countries are deficit food, the significant capacity to supply agri-food products as exports is vested with few; Canada is among this group. To continue past patterns going forward, domestic production and processing must be maintained, and export markets need to remain open.

The notion of food surplus and deficit measured simply as tonnes of product is not unequivocal, as it mixes product according to value (a tonne of soymeal is not equivalent to a tonne of cheese) and nutrient content (a tonne of beef is not equivalent to a tonne of roots and tubers). For storable products, changes in stocks can alter supply in a given year. The choice of products included, e.g., seafood, processed foods, will also affect the result. It also abstracts from demand preferences, at least in concept; some countries can have a suitability to generate products that are not preferred or affordable for its consumers in domestic consumption. Some aspects of these issues are captured in a net export orientation ratio, measured in value terms. Rather, the ratio based on volume focuses on capacity, with some recognition that resources used to produce a given volume of a product could in many instances be redeployed to produce another.

Clearly, this approach is crude; a more detailed analysis based on nutrients, domestic and export prices, demand preferences by commodity and country, the role of stockholding, as well as other variables may well be needed.

Canadian Situation

The OECD data illustrate that when we simply net out the tonnes of agri-food products exported from the tonnes imported as a share of total tonnes produced, Canada has an exceptional share of agri-food production capacity it can devote to export. Figure 1 below provides a summary for selected products, based on 2019 data.⁹

The figure shows that for a broad range of grain and oilseed products, Canada produces far beyond its existing domestic needs. In several cases, notably durum, lentils, and flaxseed, more than 80% of

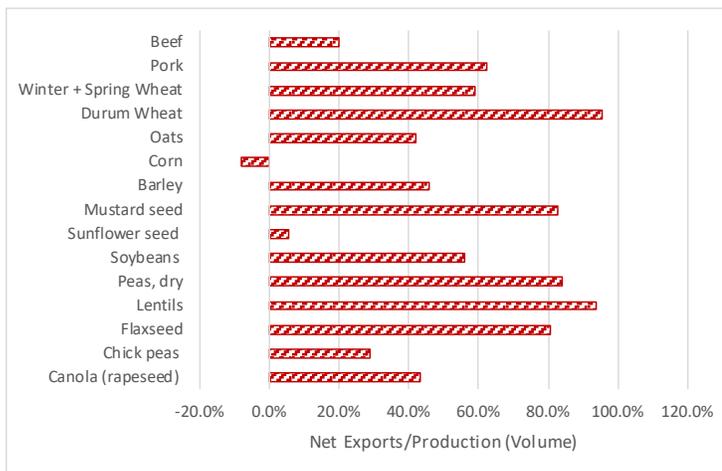
⁸ Note that, by definition, the sum of all countries' net exports must be zero

⁹ This assumes a continuing ability in Canada to maintain agricultural production and processing, through the current crisis and beyond

domestic production capacity is deployed for export. For pork, 62% of production capacity was deployed to export in 2019; the share for beef was 20%. For almost all of the products listed, 30% or more of production capacity is deployed to export. The exceptions are chickpeas (29%) sunflower seed (6%), and corn for which Canada was a small net importer in 2019.

The list could be expanded to include most products outside of horticulture that are non-supply managed, as well as selected horticultural products, especially greenhouse vegetables and potatoes.

Figure 1 Canada Net Trade/Production; Selected Products, 2019



Source: Statistics Canada, CIMT
 Beef includes: HS 02010, 020120, 020130, 020220, 020230
 Pork includes: HS 020312, 020319, 020321, 020322, 020329

Implications for Canada

The global data from 2017 forms an important backdrop for the situation that has developed since 2018, and the current situation dominated by the

coronavirus pandemic. Since 2018, the world has experienced a protein crisis throughout east Asia due to African Swine Fever which appears largely unabated, with ongoing fears of its spread, including to Canada. The combination of ongoing bilateral trade tensions (e.g., US-China, Brexit) and concerns with global trade governance has compromised the WTO dispute resolution mechanism, and the apparent resolution of some of these tensions may contravene WTO rules. Turmoil in trade has spawned a dramatic resurgence in domestic agricultural support, notably in the US.¹⁰ The coronavirus pandemic and fear of Covid-19 illness now threatens the operation of international supply chains and agri-food trade flows, with fears of food shortages influencing policies of some countries.

Yet, there is no immediate crisis of food supplies. As Glauber *et al.* have recently pointed out, the global stocks/use ratios for staple food products do not in any way suggest that the world is on the cusp of running out of food.¹¹ However, as reactions/overreactions occur due to the coronavirus crisis, supply chains can be distorted in a manner that creates artificial local and global shortages. Left in place long enough, artificial shortages become real and create pressure for change that could last well past the coronavirus crisis.

In a world in which some countries are inclined to hoard, the capacity and willingness of a country to supply others beyond its own needs, on a reliable basis, is highly valuable, and constitutes a form of soft power- especially with countries in agri-food deficit positions.

This situation is developing just as Canada faces new realities that have effectively weakened the position of small countries in international trade with the emergence of leverage among the big geopolitical powers to secure market access and protect

¹⁰ The recently approved US stimulus package contains \$US 9.5 billion in support for US agriculture, and appropriates funds of US\$14 billion for the Commodity Credit Corporation.

¹¹ <https://www.ifpri.org/blog/covid-19-trade-restrictions-are-worst-possible-response-safeguard-food-security>

themselves, and the associated erosion of rules-based trade. In a recent article, Richard Haass argues that the coronavirus pandemic will only accelerate these trends.¹²

The re-emergence of significant agricultural support since 2018 exacerbates the situation that faces Canada in agri-food. It poses a dire situation, and one in need of a solution in the form of alternative strategy. Canada cannot match the subsidies by other countries, simply because most of our major commodities are heavily trade dependent, while other countries have a far wider array of products, with smaller shares in net trade. Subsidies in the US, for example, affect almost all of our major agricultural products in trade, but a much smaller share of their wider range of products. With the openness of Canada's borders for imports, what other countries undertake in domestic support can deeply affect domestic and international markets for Canada's producers, processors and exporters.

This implies that Canada, as a small to mid-sized economy, faces an unparalleled problem, but also an opportunity to seek changes in Canada's trading relationships bilaterally and multilaterally. While Canada's problem is the ability to fully supply our products abroad, other countries' interests are to secure consistent imports of high-quality products over time. There may well be opportunity in more directly aligning Canada's interests with other countries' interests

Conclusion

As of early April, 2020, Canada is still very much in the emergency management phase of the coronavirus crisis. Keeping agri-food supply chains operating in

the midst of growing issues with worker absenteeism and transition in the coordination of markets is the priority. At the same time, it is increasingly evident that Canada will need a new domestic and trade strategy for agri-food.

Canada's mostly export-oriented, liberalized trade approach is becoming encircled by a combination of protectionism and mercantilism among geo-political powers, a weakened global rules-based trade governance system to protect small countries from these leverage tactics of large countries, and expansion in agricultural subsidies by others that Canada is in no position to match.¹³

It is in this regard that, as some countries actively limit exports and hoard product, it presents Canada with a strategic opportunity to focus on a soft power approach in agriculture and food. A number of countries, lacking in food supply capacity and having previously protected their own agri-food sectors, must find themselves worried at the prospect of agri-food exporters reigning in their supplies. By staying the course with its significant export capacity, Canada can further elevate its position, and increase its international influence- countering the trends of geo-political power politics.

To deliver on this approach, agriculture and food production and processing must be seen as a critical industry, including the infrastructure on which it relies. Major elements of this include:

- Maintaining the supply of labour, other inputs and related services throughout the domestic sector;
- Protecting the network of connections among agri-food supply chains, and capacity, as an element of public safety;

negative impacts on the western Canadian economy- and which puts further pressure on agri-food as a source of economic activity for western Canada. A complicating factor is that as oil prices have dropped, it has pulled down the values of a range of agri-food byproducts- such as fats, oils and ethanol.

¹² Haass, Richard N. "The Pandemic Will Accelerate History Rather Than Reshape It", *Foreign Affairs* March-April 2020 <https://www.foreignaffairs.com/articles/united-states/2020-04-07/pandemic-will-accelerate-history-rather-reshape-it>

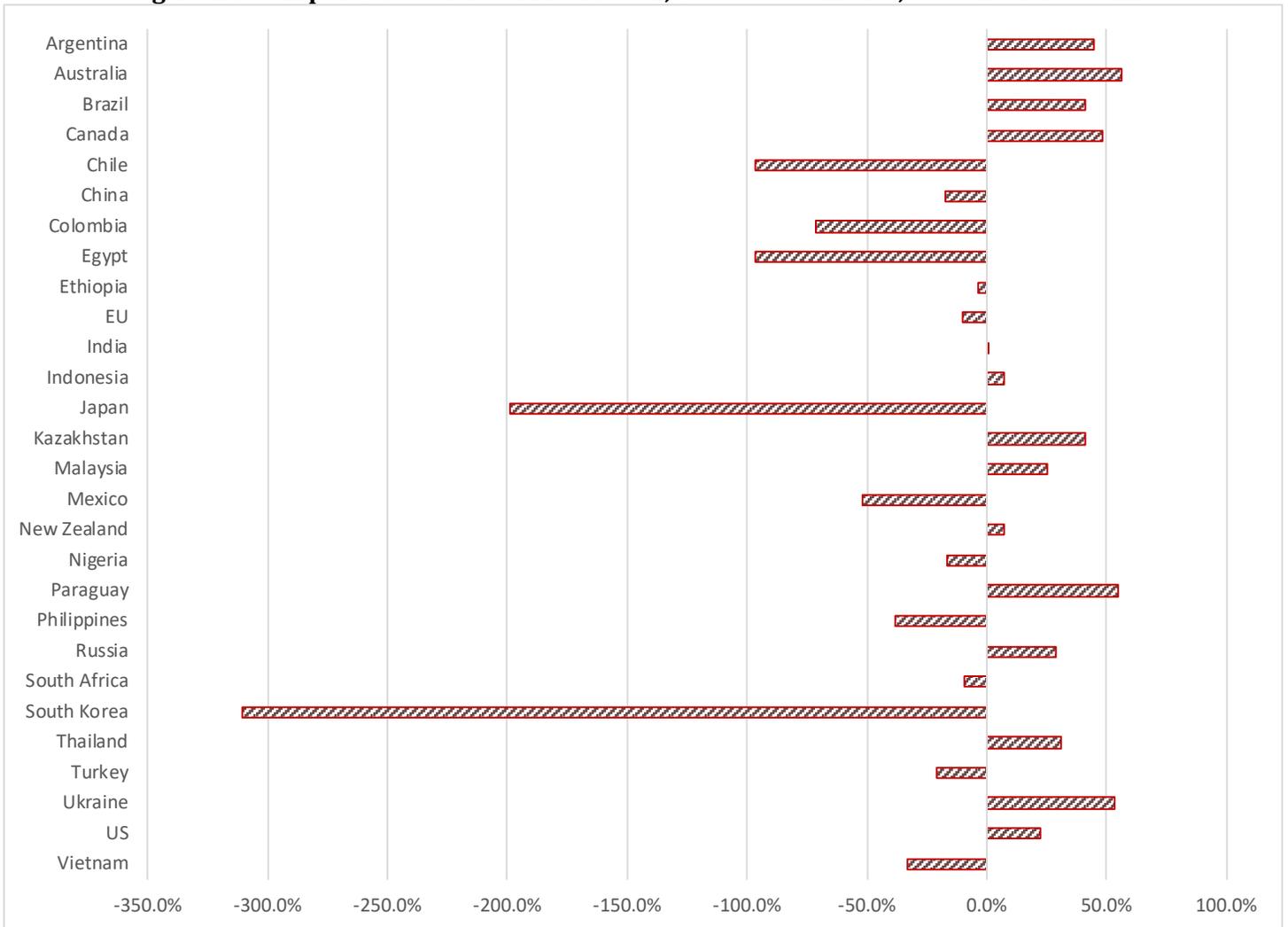
¹³ Another factor, outside the scope of this policy note, is the remarkable deterioration in energy markets- with serious

- Assuring access to export markets under current and possibly future bilateral or multilateral arrangements.

In its privileged position, Canada has an opportunity. Grasping and maintaining this opportunity will rely urgently on governments and industry to collectively seek out and agree on the myriad steps to implement domestic actions, and to re-engineer food trade exports with willing partners abroad. Success in this regard will depend on other countries coming to terms with their optimum sustainable agricultural capacity.

Without this, Canada will remain within the clutches of the big powers as they redesign trade policies to their own benefit, to the exclusion of small and medium-sized countries.

Figure 2 Net Exports as a Share of Production; Selected Countries, Measured as Volume



Source: OECD-AgLink

Products include: Wheat, Corn, Other coarse grains, Rice, Soybeans, Other oilseeds, Protein meals, Vegetable oils, Sugar, Beef and veal, Pork, Poultry meat, Sheep meat, Butter, Cheese, Skim milk powder, Whole milk powder, Whey powder, and Roots and tubers

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